UNIVERSITY OF TORONTO
DEPARTMENT OF POLITICAL SCIENCE
Fall 2020

POL2503H:
Thinking Through Research Design

Prof. Mark S. Manger
Wednesdays 10:00am-12:00pm

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Office hours: Tuesdays, 12:00-2:00pm, and by appointment (recommended)

Overview:
This course is designed for MA students. It provides an introduction to the principles of research design and causal inference applicable to qualitative and quantitative empirical research. No background in research methods or design is required. The focus is firmly on empirical research, so it is less suitable for students who want to conduct normative or prescriptive work.

Objectives:
To gain an understanding of research design and the challenges to causal inference as used in political science, to critically evaluate research designs used in the literature, and to develop the foundations to come up with research questions and feasible designs to answer them.

Prerequisites:
None beyond admission the Political Science MA program.

Teaching method:
Weekly two-hour synchronous seminar led by the instructor, except for two weeks that are asynchronously taught, i.e. you are required to watch video lectures online on Quercus and complete the assigned tests on Quercus. The synchronously taught seminars will be held at the scheduled time via BB Collaborate. Refer to the schedule for details.

Assignments, Grade Breakdown, and Policy on Absences:

- 8 short analytical notes, marked as complete/incomplete, each worth 2% of the final course grade (16% in total) to be submitted online. The notes are always due at midnight before class.

- 2 peer reviews of draft research proposals, 7% each (14% in total). Both are due on midnight before our classes on December 2. This is marked as pass/fail to incentivize you to put in your best effort.

- Completion of the two online quizzes worth 5% each (10% in total) also due at midnight before our class.

- Class participation (20%) during our seminars and in discussion threads on Quercus. Quantity is greatly encouraged. Political scientists are a loquacious tribe so get used to talking a lot. Contributions on Quercus count toward participation, but you cannot compensate for not showing up for the seminar.

- Draft research design proposal (10%), due on November 18 at 6pm EST. This should be a short (250-500 word) proposal of an empirical research project. It does not need a literature review but should clearly lay out the puzzle to be explained.
• Research design proposal (30%), due December 16 at midnight. This is a long (3-4 pages plus references) version of your research design. It should be written like the first part of an empirical research paper, with an introduction, a literature review that highlights gaps in knowledge or anomalies, the actual research question(s) and/or hypotheses, and a brief description of how you would go about answering or testing these. You do not need to talk about the methodology in any detail. Although some of you will have received feedback earlier than others, those who received feedback later will have had the opportunity to learn from other people’s mistakes when revising their draft proposal. To avoid any inequity all proposals are therefore due on the same date.

• The analytical notes and quizzes cannot be submitted late. The proposal assignments incur a late penalty of 5% per day, including weekend days. Extensions can only be granted in cases of medical or family emergencies and require appropriate documentation (e.g. the university-prescribed medical note substantiating that no term work could be undertaken during specific periods of time).

• Two absences are allowed without requiring any further documentation, though I appreciate a notice by email beforehand if you know that cannot attend the session. Other absences require a medical note. Even when absent, you are required to complete the online assignments, unless medical reasons or other emergencies preclude it.

Readings: You should purchase the following required text, available at the bookstore. The links below will take you to the e-book versions should you prefer those.


The second book is highly recommended as a how-to manual for conducting your own research and not very expensive.


All other readings are available through Quercus and linked below.

Diversity: A conscious effort has been made to include authors who are minority, LGBTQ+ or members of equity-seeking groups underrepresented among social scientists, without identifying authors as such in the syllabus.

Plagiarism: Plagiarism is a most serious academic offense and the offender will be punished. Normally, students will be required to submit their course essays to Turnitin.com for a review of textual similarity and detection of possible plagiarism. In doing so, students will allow their essays to be included as source documents in the Turnitin.com reference database, where they will be used solely for the purpose of detecting plagiarism. The terms that apply to the University’s use of the Turnitin.com service are described on the Turnitin.com website. Please note that your short analytical notes, when submitted through Quercus, are automatically submitted to Turnitin.com.

Auditing the course: Not permitted.

Contacting the instructor: Office hours are listed above, but please confirm by email that I will be holding office hours that day. Until further notice, office hours will be held online via BB Collaborate. Links will be posted on Quercus.
<table>
<thead>
<tr>
<th>Session-Date</th>
<th>Topic</th>
<th>Objectives</th>
<th>Tasks</th>
<th>Readings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-16/9</td>
<td>Introduction, course overview, and some considerations on the philosophy of science (Synchronous-BB Collaborate)</td>
<td>Introduce the course and the scientific study of politics. Establish a baseline of student knowledge and interests.</td>
<td>Read the syllabus. Try to establish the design features in the second reading and submit analytical note 1 on Quercus.</td>
<td>Core: R. O. Keohane (2009), “Political Science as a Vocation”, Caprioli and Boyer (2001), “Gender, Violence, and International Crisis”.</td>
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<td>Topic</td>
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<td>Core</td>
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<td>4-7/10</td>
<td>From Concept to Operationalization (Synchronous-BB Collaborate)</td>
<td>Understand why theory-building is essential for good empirical research. Identify the central concept related to a research question, and come up with an appropriate operationalization.</td>
<td>Read the core readings. Choose one of the example readings from week 3, identify the concept measured, and propose an (alternative) operationalization. Submit as analytical note 3 on Quercus. Make sure you discuss the rationale for your operationalization.</td>
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<td>5-14/10</td>
<td>Causal Inference and Causal Graphs (Asynchronous-Quercus)</td>
<td>Learn how to use causal graphs to clarify the research design challenges in your own research.</td>
<td>Read assigned core readings. Watch the lecture on Quercus. Complete the second online quiz.</td>
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<td>6-21/10</td>
<td>Controlled Treatments (Synchronous-BB Collaborate)</td>
<td>Understand the rationale for experiments and the most important strengths and weaknesses.</td>
<td>Read the core readings. Choose one example reading. Identify the design features of the experiment from the study and submit as note 4 on Quercus.</td>
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<tr>
<th>Date</th>
<th>Topic</th>
<th>Assignment</th>
<th>Reading</th>
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<td>7-28/10</td>
<td>Uncontrolled treatments I: Quasi-random assignment</td>
<td>Understand how instances of “as-if random” assignment can be identified.</td>
<td>Read the core reading. Choose one of the example readings. In analytical note 5, summarize and assess the identification strategy.</td>
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<td>(Synchronous-BB Collaborate)</td>
<td>Understand the concept of quasi-experimental research.</td>
<td>Core: Jones and Olken, (2009), “Hit or Miss?”</td>
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<td>8-4/11</td>
<td>Uncontrolled treatments II: Instrumental variables</td>
<td>Understand why instrumental variable approaches are useful.</td>
<td>Submit note 6 on Quercus, describing the logic of the identification strategy in Ritter and Conrad and one of the example readings.</td>
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<td>(Synchronous-BB Collaborate)</td>
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<td>Core: Ritter and Conrad (2016) “Preventing and Responding to Dissent”.</td>
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<td>9-18/11</td>
<td>Uncontrolled treatments III: Comparative Inquiry without Identification</td>
<td>Understand the limits and strengths of comparative studies, or “conditional ignorability.”</td>
<td>Submit note 7 on Quercus, discussing and assessing the research design of one of the example readings in the light of this week’s and the past two weeks’ core readings.</td>
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<td>Topic</td>
<td>Activity</td>
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<td>11-2/12</td>
<td>Exploring the frontier of research, Part 1</td>
<td>Apply the principles and logic of research design learned in the course to offer constructive feedback on your peers’ initial proposals.</td>
<td>Submit two peer reviews on Quercus, offering constructive feedback on the research design proposals that have been assigned to you. Be prepared to discuss your own draft proposal with your peers. Core: Przeworski and Solomon (1988,1995), “The Art of Writing Proposals,” Assigned proposals on Quercus.</td>
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<td>12-9/12</td>
<td>Exploring the frontier of research, Part 2</td>
<td>Apply the principles and logic of research design learned in the course to offer constructive feedback on your peers’ initial proposals.</td>
<td>Be prepared to discuss your own draft proposal with your peers.</td>
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Detailed Session Description

Session 1 (Sep 16): Course Overview
This introductory week will have mainly logistical objectives and provide an overview of the course. A first writing assignment gives you an opportunity to begin thinking about research design: Try to identify the “design features” of Caprioli and Boyer (2001). Like all the required analytical notes, this assignment will only be graded as complete/incomplete. Try to put in at least some effort because it is a useful exercise and because you will see your own progress when you look back to it later. The summary should be short, fewer than 250 words, and submitted on Quercus.

Session 2 (Sep 23): Lecture on Causality and the Potential Outcomes Model
The traditional understanding of causality as “regularity” in the social sciences has been superseded by the “potential outcomes” model. This has profound implications for modern research design and empirical research. This lecture introduces the model and spells out some implications. Allocate enough time to this asynchronous part because the material is very technical and among the more abstract you will encounter in Political Science. In departure from the usual approach, you should watch the lecture first and then read the assigned core reading at your own pace, as it should be more accessible after following the lecture.

Session 3 (Sep 30): Engaging with the Literature
The first step after the initial idea for a research project is to survey the literature. It helps you develop and sharpen your ideas and supports your case when you are applying for funding for your research or graduate studies. Writing compelling literature reviews is more craftsmanship than art, so it can be honed. The readings for this week are mostly from the Annual Review of Political Science that asks experts to survey the particular subject area and identify future research avenues.

Session 4 (Oct 7): From Concept to Operationalization
Concept development is one of the mainstays of the social sciences, simply because what we observe is always socially constructed. Empirical research therefore depends crucially on theorizing. Furthermore, even clear concepts are not always easily measured. The step of developing measures for concepts is called “operationalization.”

Session 5 (Oct 14): Lecture on Causal Graphs
In this lecture, we will explore one of the most deceptively simple but useful tools in causal inference – directed acyclical graphs. These serve to clarify hypothesized causal links, what variables to condition on, and what might be observable and unobservable in a given research design. Again, in departure from the usual approach, you should watch the lecture first and then read the assigned core reading at your own pace, as it should be more accessible after following the lecture.

Session 6 (Oct 21): Controlled Treatments - Experiments
Controlled experiments are considered the gold standard in science to test hypotheses because if properly done, they allow internally valid conclusions. All other approaches are at least partially trying to solve the problem of not being able to run an experiment. At the same time, experimental approaches are often criticized for having limited real-world relevance. We will discuss a few examples and the specific problems of experiments in Political Science.

Session 7 (Oct 28): Uncontrolled Treatments – Quasi-Random Assignment
If we cannot control and randomly assign treatments, we can try to mimic the approach by identifying instances of “as-if random” assignment and “natural experiments.” The approach has obvious limitations because “exogenous variation” may not exist, but when it is available, it can lead to powerful conclusions.
Session 8 (Nov 4): Uncontrolled Treatments – Instrumental Variables

When we can’t conduct experiments and without exogenous variation, instrumental variables are the last feasible method to make truly causal claims. In a nutshell, this involves finding a variable that affects our presumed cause and therefore the outcome, but only through our presumed cause and only in one direction. Such “instruments” are not always available and come with their own difficulties. The statistical implementation requires sophisticated techniques so that our focus here is on the conceptual idea.

(No class on November 11 – Fall Reading Week)

Session 9 (Nov 18): Uncontrolled Treatments – Comparisons and Matching

“Controlled comparisons” are still an important approach in the discipline, but recent research has highlighted their limitations. At the same time, comparison-inspired techniques such as matching that originated in political science and economics have been adopted by many other disciplines, including in medical research. We will discuss the origins and continued relevance for Political Science research and explore recent ideas to improve the ability to make causal claims based on systematic comparisons.

Session 10 (Nov 25): Transparency and Replicability - Short research design proposals due

In this session, we will briefly discuss the short research design proposals and offer constructive feedback. The required readings for the session are the proposals that will be shared on Monday (18th) in the evening.

Session 11 (Dec 2): Exploring the Research Frontier I

In this session, we will discuss a sample of the submitted research proposals. Each student will be assigned two research proposals to read. You will then submit a peer review note for each offering constructive feedback on the research design.

Session 12 (Dec 9): Exploring the Research Frontier II

In this session we will discuss the second set of proposals.

(Dec 16): Final research proposals due at midnight.

Your final research proposals are due December 16 at midnight via Quercus.